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ABSTRACT

Social cognitive abilities were evaluated in 23 deaf students (3 to 6 years old) through tasks requiring spatial perspective taking, cooperation, and receptive language. As hypothesized, language ability proved to be a prediction of both other variables, with the high correlation between language and perspective taking indicating a definite relationship. Special difficulties involved in comparative research with deaf and hearing children are noted. (CL)

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# The Development of Social-Cognition in Deaf Preschool Children: A Pilot Study

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The Development of Social-Cognition in Deaf Preschool Children:
A Pilot Study

According to Piaget, social-cognitive abilities such as perspective-taking and cooperation should not begin to emerge until a child is around 7 years of age (Piaget and Inhelder, 1956, 1969). However, recent research indicates that even preschool children demonstrate social-cognitive abilities, provided that simplified tasks are used (Borke, 1975; Masangkay, McCluskey, McIntyre, Sims-Knight, Vaughn, and Flavell, 1974; Mossler, Marvin, and Greenberg, 1976).

While research has been abundant on the development of normal preschool children, little attention has been paid to the development of handicapped children. Deaf children in particular provide an interesting group in which to examine the development of social-cognition. Since language development is an integral part of social-cognitive development, the deaf child, whose language input is limited to either sign language or lip-reading, might be expected to differ from the hearing child in social-cognitive development.

The testing of deaf children poses a problem precisely because of their language deficit. Instructions must be communicated almost entirely in a nonverbal manner. Likewise, responses must require no more than rudimentary verbal skills. Ideally, tests should be devised in which incorrect responses due to lack of understanding of instructions may be discriminated from failure <u>despite</u> comprehension of instructions. With these concerns in mind, the present study undertook the development of

methodology for examining the social-cognitive development of the deaf preschool child.

Subjects were 23 deaf children between three and six years of age (mean age = 59 months), who were enrolled at the Atlanta Area School for the Deaf (AASD).

The children were individually tested in each of three areas: spatial perspective-taking, cooperation, and receptive language. All instructions were given in both spoken and signed English, i.e., Total Communication (the customary mode of communication at AASD).

In the perspective-taking task, the child (S) sat on the floor next to an experimenter (E1), with pictures of common objects, e.g., shoes, dog, car, ball, etc., on the floor in front of them. Another experimenter (E2) sat facing S and E1, with an 18 inch high partition separating S from E2, such that E2 could not see the pictures, but E1 could. The child was asked to "show me the car, ball, etc., " first by E1, and then by E2. Showing the picture to E1, either by picking it up or pointing to it, indicated that the child understood the instructions, but did not require perspective-taking. When asked to "show me the ____ " by E2, the child had to pick up the picture and hold it above the partition in order to be scored as non-egocentric. Simply pointing to the picture was scored as an egocentric response.

The cooperation task, devised by Kramer (1980), required two children to build a tower of colored wooden blocks. A model of alternating green and red blocks was presented to the two children, and each child was provided with a pile of blocks.

One child received green blocks, and the other child received red blocks. They were then asked to build a tower "the same as" the model. The children were scored as cooperative only if they built a tower together. If they failed to build a tower, or built two separate towers, they were scored as non-cooperative.

The language measure used was the SKI-HI Receptive Language Test (Longhurst, Briery, and Emery, 1975), a test developed at Utah State University specifically for use with deaf children. The test is similar to the Peabody Picture Vocabulary Test (Dunn, 1959), in that the child is given a word and required to point to the appropriate picture from among several choices. No expressive language is required of the child, and training items allow the instructions to be conveyed with little or no language. Thus, the test is appropriate for testing children with minimal language.

We were primarily interested in answering two questions. First, is perspective-taking necessary for co-operation? Second, how does language development relate to the development of perspective-taking and cooperation? In answer to the first question, of the 11 children who were able to cooperate, 9 of them also evidenced perspective-taking ability. The binomial probability of such results occuring by chance is .0328. In contrast, of the 16 children who were able to perspective-take, 7 of them could not cooperate. Thus it seems that, based on our measures of the two skills, perspective-taking is necessary, but not sufficient for cooperation in deaf children.

As expected, language ability proved to be a predictor of both perspective-taking and cooperation. By splitting the language scores at the mean, we found that among those with low language scores, only 40% could cooperate, and 60% could perspective-take. However, among those with high language scores, 71% could cooperate, and 85% could perspective-take. Furthermore, the high correlation between language and perspective-taking ( $\underline{r}$. = .48; $\underline{p}$. < .05), suggests that the two are indeed related.

We realize that we made somewhat naive distinctions in our measures, by dichotomizing what are in reality contiuous variables. The distinction between a child who can or cannot perspective-take or cooperate is determined to a large extent by the choice of test that is used. What is really needed is a series of increasingly difficult tasks. Then it would be possible to discern not just whether or not the child can perspective-take or cooperate, but rather, under what conditions he can do so. Recognizing this difficulty, we are still revising our testing procedures in order to more accurately assess social-cognitive skills as continuous rather than as dichotomous variables.

So far, using a new and more discriminative coding system, and several additional tasks, we are finding patterns similar to those reported here in hearing preschool children. Our major problem at this point is to integrate our research on deaf children with our research on hearing children. Because of the language deficit of deaf children, it is very difficult to

develop tests which are appropriate for both deaf and hearing children. For instance, the perspective-taking task used in this study is quite easy for almost all the hearing children we have tested. We are not sure whether the difference between the two populations is due to a real difference in perspective-taking ability, or simply due to the language deficit of the deaf.

In conclusion, our primary objective was to develop a methodology for the assessment of social-cognitive development in deaf children. We have begun, but certainly not completed this task. In addition, we were able to tentatively demonstrate relationships between the various social-cognitive skills which we assessed, though replication is necessary before definitive statements are warranted.

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